is very apparent. After description of nine pathogenic species previously studied, four new ones are added as the outcome of his own investigations.

Among the diseases of the mouth, to the knowledge of which the author has contributed, may be mentioned "pyorrhœa alveolaris," a chronic suppurative inflammation of the periosteum of the tooth, with more or less intense inflammation of the gum and necrosis of the alveolar process. This he concludes to be due to the action of no one specific germ, but to that of any one of a number, acting upon a system much reduced by other disease.

Special stress is laid upon the importance of the mouth as a point of entrance for microörganisms in diseases of the pharynx, larynx, lungs, and alimentary tract, and it is pointed out that in operations about the mouth we have the conditions most conducive to infection of the blood and through it of the body in general. Thorough antisepsis is, consequently, most essential.

In conclusion, short mention is made of the various yeasts and moulds which have been found in the mouth by various observers.

The volume is well printed and abundantly illustrated. A copious bibliography and index add very materially to its usefulness. Its perusal is recommended to all those interested in following the growth of our rapidly increasing fund of information upon the relations of microorganisms to disease. J. S. E.

TRANSACTIONS OF THE AMERICAN ORTHOPEDIC ASSOCIATION. Vol. I. 8vo., pp. 303. Boston, 1889.

THIS is an exceedingly interesting volume, containing the transactions of the first and second annual meetings of the American Orthopedic Association. The first twenty pages only are devoted to the first meeting, which was held chiefly for the purpose of organization. The articles are all by men recognized as specialists in this important branch of surgery, and for scientific interest and practical value represent a collection of monographs on orthopedic subjects that is unique. They are all so uniformly excellent that it is difficult to select those which would be of most interest to the general readers.

Dr. V. P. Gibney contributes a "Report on the Treatment of Clubfoot by Means of the Thomas Wrench," in which he commends the simplicity of the instrument combined with tenotomy, and the subsequent use of ordinary shoes built higher on the outer side, and records twelve cases thus successfully treated.

Dr. E. H. Bradford also contributes a paper on the "Treatment of Clubfoot," to which is appended a table of one hundred and one cases, with a record of results and detailed notes of illustrated cases. The subject is handled in a masterful and impartial manner, is illustrated with numerous drawings, and there is a ring of sincerity that will please the general surgeon. In summarizing, he says: "In no branch of surgery can a cure be more confidently promised than in the treatment of clubfoot, and in few surgical undertakings do half measures occasion greater annoyance" (p. 112).

Dr. Royal Whitman presents his "Observations on Seventy-five Cases of Flatfoot," in a paper of considerable value, and offers to the profession a brace of thin, tempered steel (to be worn inside the shoe), with which he has obtained the best results. It resembles somewhat the plantar spring of Dr. Roberts, but differs from it in being inelastic, and being made upon a special plaster-cast taken from the foot, placed at right angles to the leg and slightly flexed at the medio-tarsal joint. The brace (as he prefers to call it) is short, and is applied in such a manner as not to interfere with any of the natural movements of the foot.

Dr. De Forrest Willard's paper on "Osteotomy for Anterior Curvatures of the Leg," is able and instructive. It is, in fact, one of the best papers on the subject that has been written, and its author can speak authoritatively from a large experience. In speaking of the cases in which forcible fracture *versus* osteotomy should be employed, he considers that for children under three years the former (forcible manual fracture), and over three years the latter operation (osteotomy), is to be preferred, sclerosis or hardening having occurred in the latter cases. This is a good practical rule, but in doubtful cases recourse should be had to the bone drill to determine the exact density of the bone, and preferably the cog-wheel drill of Colin, of Paris.

The paper of R. W. Lovett, of Boston, "An Experimental Study of Fixation and Traction in the Treatment of Hip-disease, with the Description of a Splint," presents the results of a number of experiments to determine what degree of fixation occurs in using the traction hip-splints, especially the Taylor splint with a rigid waistband encircling the pelvis, and two perineal straps instead of one. The results showed "that traction in itself furnishes very incomplete fixation, and cannot be regarded as in itself a means of fixing a diseased hip-joint in the treatment of hip-disease; and that a Taylor hip-splint, with a rigid pelvic band and two perineal straps, furnishes much more complete fixation to the joint than the newer form of splint with only one perineal band." In conclusion, he exhibited a splint which was merely a modification of the English Thomas splint with an American Taylor splint, to be employed in certain bad cases as a means of furnishing fixation and traction while the patient goes about on crutches. This supplies an apparatus for which every surgeon who sees many of these cases has wished, and deserves a fair, unprejudiced trial.

A somewhat similar brace, combining the same principles, has been more recently recommended by Dr. A. M. Phelps, of New York.[1]

This paper brought out the two principles underlying the modern treatment of chronic joint disease—immobilization as opposed to extension with motion—principles which have always been the *causus belli* wherever the names of Thomas and Taylor are known; and these were again discussed when Dr. V. P. Gibney's paper on "Immobilization in Articular Disease" was read. Dr. Gibney's concluding remarks on this subject are very positive and important: "In concluding, let me state firmly my belief that whatever ankylosis occurs in a joint which has been subjected to immobilization, occurs not by reason of the immobilization, but of the nature and intensity of the inflammation, and of the inefficiency of the apparatus employed."

It was proven that the most important factor to the treatment of joint-disease was immobilization, and we believe, as Dr. Phelps remarked in the discussion, that "the more perfectly a joint is immobilized the better the results will be, but that immobilization *cannot be accomplished without extension.*"

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[1] The Medical Record, May 4, 1889, p. 477.

This volume contains also a well-written and practical article on the "Etiology and Pathology of Rachitic Deformity, with a Report of One Hundred and Fifty-eight Consecutive Osteotomies without Suppuration," by Dr. Charles N. Dixon Jones. In speaking of the etiology, he supports the views of Dr. W. B. Cheadale, that primarily rachitis is a diet disease which can be produced at will, the chief defect being a want of animal food, with a deficiency of phosphates and animal proteid, accentuated by evil hygienic conditions, and modified by the concurrent existence of congenital syphilis and scurvy. Speaking of its surgical treatment, he condemns the osteoclast as "an instrument of tremendous and brutal power," and advocates successive osteotomies combined in some cases with tenotomies, having in one case performed as many as eighteen osteotomies. Doubtless, in the hands of skilful surgeons who observe all due antiseptic precautions, this operation is entirely free from danger, but it must not be forgotten that at least four deaths have resulted from osteotomies, besides numerous cases of severe local and constitutional disturbances. Again, as Dr. Phelps remarked in discussing Dr. Vance's paper on "Femoral Osteotomy," "such cases (septicæmia) should not be classed as deaths from osteotomy, but charged up to the accident of the operator" (p. 164). No deaths have yet been reported from osteoclasis, and hence, for general recommendation, in the shafts of long bones away from joints where osteoclasis will lead to the same result, it is the safer and simpler procedure. The author's method of suspending the limbs after osteotomy is excellent, but the same has been in use for some time in Dr. Rupprecht's wards in Dresden. Altogether, the article is a valuable contribution to the subject of rachitis, and the surgical treatment of the deformities resulting from it.

Notwithstanding the seldom occurrence of double hip-disease, Dr. John Ridlon has recorded fourteen cases which have come under his observation since 1884. He holds that:

> "The disease seldom *begins* in both hip-joints at the same time; and the *second* joint may become diseased while the patient is resting in bed under treatment for the *first* joint. In other words, *traumatism* can be excluded from the elements of causation of the disease in the second joint in very many cases.
>
> "The joint that is first affected is often last to recover. This would seem to be due to the fact that before *both* joints are involved, and after one has recovered, the patient is allowed to walk around, giving the *one* diseased hip both pressure and motion, thereby delaying the cure and forming ankylosis with flexion and adduction.
>
> "The duration of the disease in the *first* hip is usually somewhat less than that of the average case of hip-disease, while the duration in the *second* hip is usually much less than that of the first. This, it seems to us, can only be accounted for by the fact that during the time that both hips are involved the patient is kept pretty rigidly in bed, thus removing the superincumbent weight, and by that much diminishing joint destruction."

In regard to treatment, the weight and pulley was found uniformly to relieve pain, but to prevent flexion, adduction, or spontaneous sublaxation after abscess the application of the double long traction splint was much more effective, and gave better results "when used upon a patient confined to bed during the acute stage of the disease" than when used as an aid to locomotion. The author favored the double hip-splint of Thomas, which, he says, "serves a better purpose." "The more absolutely quiet the patient be kept, and the longer the period of quiet, the shorter will be the duration of the disease and the better the ultimate result." Only one of the cases died, "and that from tubercular meningitis supervening at the time when the general health was good." This is a valuable contribution to our meagre knowledge of this subject.

One of the best papers in the collection is from the pen of Dr. Newton M. Shaffer, "On Some of the Deformities of the Tarsus in Congenital Equino-varus," whose skill in applied mechanism has accomplished so much to relieve these deformities without operative interference. In considering the subject from an anatomical standpoint, he assumes

> "the following as a basis to treat the conditions under consideration: First, that there is a compound deformity in equino-varus, due to rotation of all the bones of the tarsus upon three distinct axes—that is, transverse, antero-posterior, and vertical; secondly, that this compound deformity is due to a loss of relation between muscular and osseous growth, not to muscular contraction or contracture, as has generally been supposed; thirdly, that the principal obstacles to the reduction of the deformity are (1) the position acquired by the astragalus with or without an intrinsic deformity of the neck, and (2) the ligamentous shortening; fourthly, that these difficulties are much increased by the progressive ligamentous and osseous changes that occur as the direct result of prolonged malposition; and fifthly, that the deformities of the medio-tarsal joint are secondary in importance to those which occur at the astragalus" (p. 297).

The mechanical treatment is directed to overcome each of these three varieties of rotation—the *transverse* at the elevated heel; the *antero-posterior* at the inward rotation of the os calcis; and third, the *vertical*, the inversion of the entire foot. Speaking of the structures which resist restoration, he regards the internal lateral ligament "as being far more important than the gastrocnemius or plantar shortening," and says: "If we can find some means to overcome this shortening of the internal lateral ligament, I am sure we will find that the duration of the treatment of congenital equino-varus will be very materially shortened, and much better and far more permanent results will be secured" (p. 299).

In the new apparatus presented, the traction force applied to the outer side of the leg and foot is more accurate, simple, and powerful than the pushing force.

The volume is an excellent specimen of the printers' art, and reflects great credit on the Association. J. K. Y.

DISEASES OF THE SKIN. By W. ALLAN JAMIESON, M.D., F.R.C.P.ED. Second Edition, Revised and Enlarged. 8vo., pp. xvi., 573. Edinburgh and London: Young J. Pentland, 1889.

THE present edition, following so soon after the first, "has not," as the author states, "permitted sufficient time to elapse to render necessary any extensive alterations in the plan of this work." And yet, in looking over the text, it is found that in several particulars important